DEVELOPMENT, VALIDATION AND RELIABILITY TESTING OF STROKE SPECIFIC SHOULDER DISABILITY INDEX.

Synopsis Submitted to:

Maharishi Markandeshwar (Deemed to be University)

Research Advisory Committee (RAC)

MAHARISHI MARKANDESHWAR
(DEEMED TO BE UNIVERSITY)
Mullana-Ambala, Haryana
(Established under Section 3 of UGC Act, 1956)
(Accredited by NAAC with Grade 'A')

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DOCTOR OF PHILOSOPHY

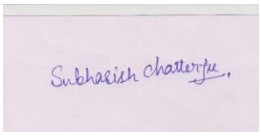
(Physiotherapy)

Submitted by:

Subhasish Chatterjee

Roll no: 20170002

Supervisor



Dr. Vandana Esht, PhD

Associate Professor, MMIPR

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Introduction

Stroke is an increasing public health concern throughout the world. It is the second commonest cause of death and leading cause of long term disability.[1] The generally accepted definition of stroke originates with the world health organization (WHO) and dates back to 1980 which states that Rapidly developing clinical signs of focal (at times global) disturbances of cerebral function, lasting more than 24 hours or leading to death with no apparent cause other than that of vascular origin. It is the second commonest cause of death and fourth leading cause of disability world wide.[2] Approximately 20 million people each year will suffer from stroke and of these 5 million will not survive.[3]

In India, the Indian Council of Medical Research (ICMR) estimates in 2004 indicated that stroke contributed 41% of deaths and 72% of disability adjusted life years amongst the non-communicable diseases.[6] several population-based surveys on stroke were conducted from different parts of India. During the last decade, the age-adjusted prevalence rate of stroke was between 250-350/100,000.[7] Recent studies showed that the age-adjusted annual incidence rate was 105/100,000 in the urban community of Kolkataand 262/100,000 in a rural community of Bengal.[7, 8]The ratio of cerebral infarct to haemorrhage was 2.21. Hypertension was the most important risk factor. Stroke represented 1.2% of total deaths in India.[9]

Shoulder problem is a frequent complication after stroke ranging from 34-85%.[10] the onset of shoulder problems after stroke starts from two weeks and most evident after 2 to 4 months.[11] Common shoulder problem following stroke includes pain (85%), Subluxation (84%), Impingement, frozen shoulder, reflex sympathetic dystrophy, spastic shoulder etc.[12] because of its severity therapeutic interventions should be checked for

its efficacy by researches. So we need a valid and reliable outcome measure to quantify the shoulder problem after stroke. The present available outcome measures for stroke includes either entire upper extremity or only for hand function. Shoulder disability scales currently used in researches are also not specifically developed for stroke patients.[13]

Hemiplegic patients who is having shoulder problems may suffers from pain, subluxation, altered tone, frozen shoulder, impingement, disturbed proprioception, difficulty in ADL, and poor quality of life. The existing outcome measures are not well designed which will cover all the domains of shoulder dysfunction after stroke and as those outcome measure also contains domains of elbow and hand, researchers who is focusing on shoulder rehabilitation may not get proper outcome by using those existing scales. So the main purpose of the study is to develop a shoulder scale for hemiplegics which includes domains of pain, subluxation, ROM, proprioception, ADL, and quality of life.

1.1 Statement of Problem

There Is no specific scale until date for hemiplegic shoulder and existing upper extremity scale could not includes all the domains of hemiplegic shoulder, so it is necessary to develop a scale on hemiplegic shoulder which will covers all the related items and domains.

1.2 Purpose of the study

Purpose of the study is to develop a stroke specific shoulder disability questionnaire, which covers all the domains and items like hemiplegic shoulder pain, subluxation, ROM, ADL and quality of life.

1.3 Objective of the study

1.3.1 Development of stroke specific shoulder disability questionnaire and its domains and items.

1.3.2 Checking of its content and concurrent validity.

1.3.3 Measure of test-retest reliability.

1.3.4 Its MDC, MCID and internal consistency.

Methodology

2.1 Study design

Cross sectional study.

2.2 Study setting

Community setting.

2.3 Selection criteria

2.3.1 Inclusion criteria

1. Individual with stroke

2. Age between 40-70 years.

3. Both sex.

4. Able to follow simple command.

5. MMSC >23.

2.3.2 Exclusion Criteria

1. MMSE score <23.
2. Other musculoskeletal disorder of the affected upper extremity.
3. History of trauma to the affected upper extremity.
4. Individuals with multiple stroke.
5. Suffering from other neurological disorder.
6. TIA.

2.4 Procedure

This is a cross sectional observation study of scale development and its content validation. The draft of procedure will be approved by the ethical review committee of Maharishi Markandeshwar University. The study consist of scale domains and item generation, content validation, pilot testing, final draft, reliability testing.

2.4.1 Domain and item generation

The domain and item will be generated related to pain, subluxation, ROM, ADL and quality of life by literature search and direct patient interview.

2.4.1.1 Literature search

The literature will be searched in Pubmed, Proqest, scopus, Cochrane library by keywords of Stroke, Hemiplegia, hemiplegic shoulder, upperlimb recovery, hemiplegic hand, stroke specific quality of life, shoulder subluxation, upper limb disability scale in stroke, ADL scales in stroke.

2.4.1.2 Direct Interview

30 patients will be interviewed by the lead researcher and the patients are asked to generate items related to pain, subluxation, ROM, ADL and quality of life. Participants are encouraged to fill maximum nuber of items they feel to be included based on their current problem. Secondly participants are given a list of items that will be generated by the lead researcher based on the literature search and the participants will ask to add more item that is not mentioned in the literature.

2.4.1.3 Content validation

The draft of the scale will be sent to panel of 10 experts. Percentage of level of agreement will be 70%. Items will be deleted if it fails to reach 70% agreement.

2.4.1.4 Pilot testing

Upon content validation the scale will be administered in a pilot study to check its practical feasibility and barriers.

2.4.1.5 Final draft

After the pilot study, final draft will be prepared.

2.4.1.6 Reliability testing

Test retest reliability will be checked by one ratter in two different occasion.

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